

measuring a demand for communication services within said cell; and

changing said signal level of said broadcast channel in response to the measuring step, said subscriber unit being responsive to said signal level during the communicating step.

2. A method as claimed in claim 1, wherein the changing step comprises the step of decreasing said signal level as said demand exceeds a predetermined amount, wherein said subscriber Unit initiates a hand-off to another cell having a higher broadcast channel signal level in response to the decreasing step.

3. A method as claimed in claim 2, further comprising the step of increasing said signal level when said demand is below a second predetermined amount wherein a second subscriber units located in other cells initiate a hand-off to said cell in response to the increasing step.

4. A method as claimed in claim 1, wherein said cell has a partially overlapping service area with at least one adjacent cell and wherein the measuring step comprises the step of predicting said demand for said communication services within said cell, and wherein the changing step comprises the step of reducing said signal level of said broadcast channel when said demand is predicted to exceed a predetermined amount to cause said subscriber unit to initiate a hand-off request to said one adjacent cell when said signal level of said broadcast channel at said subscriber unit falls below a predetermined level.

5. A method as claimed in claim 4, wherein said cell and said one adjacent cell are part of a plurality of cells that move with respect to the surface of the Earth, and wherein said cell and said one adjacent cell Sequentially serve a geographic area having said demand for communication services, said method further comprising the steps of:

increasing said signal level as said cell moves away from said geographic area;

and

reducing a transmitted broadcast channel signal level said one adjacent cell as said one adjacent cell moves over said geographic area.

6. A method as claimed in claim 4, further comprising the step of communicating with said subscriber unit on said traffic channel associated with said one adjacent cell.

7. A method as claimed in claim 1, wherein said cell has at least a partially overlapping service area with adjacent cells, said method further comprising the steps of:

predicting a demand for communication services in each of said adjacent cells; and

determining which one of said adjacent cells has excess service capacity.

8. A method as claimed in claim 7, further comprising the step of increasing a broadcast channel signal level in said one of said adjacent cells determined to have excess service capacity, said subscriber unit initiating a hand-off request to said one of said adjacent cells when said broadcast channel signal level of said one of said adjacent cells exceeds a second predetermined level.

9. A method as claimed in claim 1, wherein said measuring step includes the step of measuring a real-time demand for communication services that is based upon a quantity of subscriber units communicating within said cell and including subscriber units requesting service from within said cell and subscriber units requesting hand-offs to said cell from adjacent cells.

10. A method of controlling cell loading in a cellular communication system comprised of satellite nodes, said method comprising the steps of:

communicating within a cell on a traffic channel with a subscriber unit, said subscriber unit monitoring a signal level of a broadcast channel associated with said cell; measuring a demand for communication services within said cell; and

changing said signal level in response to the measuring step, said subscriber unit responsive to said signal level, wherein the measuring step comprises the step of measuring said demand for communication services in real-time and storing a parameter in said cellular communication system related to said demand, and wherein said method further comprises the steps of:

predicting a future demand for said communication services based on said parameter;

sending a message to at least one of said satellite nodes instructing said at least one satellite node to change said signal level of said broadcast channel at a future time corresponding to said future demand; and

changing by said at least one satellite node at said future time, said signal level of said broadcast channel in response to said message.

11. A method as claimed in claim 10, wherein said at least one satellite node communicates with a plurality of subscriber units located within a plurality of cells, and wherein said method further comprises the step of repeating the measuring and storing steps for each cell of said plurality of cells, said measuring step being repeated once for each of a plurality of planning intervals, said parameter for each cell being stored for each of said planning intervals.

12. A method of controlling cell loading in a cellular communication system having a plurality of cells, each cell having a broadcast channel and a plurality of traffic channels associated therewith, said broadcast channel being monitored by subscriber units that are communicating on one of said traffic channels, said method comprising the steps of:

measuring real-time demand for communication services within one of said cells, said real-time demand including subscriber units communicating on said traffic channels; and

dynamically adjusting a signal level of said broadcast channel associated with said one of said cells in response to said real-time demand, the dynamically adjusting step causing at least some of said subscriber units monitoring said signal level and communicating on one of said traffic channels associated with said one cell to request a hand-off to an adjacent cell of said plurality when said adjacent cell has a higher broadcast channel signal level.

13. A method of controlling cell loading in a cellular communication system having a plurality of cells, each cell having a broadcast channel associated therewith, and wherein said plurality of cells moves relative to the surface of the Earth, said cells being projected by a plurality of orbiting satellites, said method comprising the steps of:

measuring real-time demand for communication services within each of

said cells;

dynamically adjusting, for each of said cells, a signal level of a broadcast channel associated with each cell in response to said real-time demand, the dynamically adjusting step causing subscriber units monitoring said signal level to request a hand-off to an adjacent cell,

determining which of said cells are planned to be turned off when cells from at least two of said satellites overlap;